

TNT-tainted soil cleanup attempted

Plant research eyes Joliet ammo facility

From wire and staff reports

Scientists at the University of Illinois are trying to defuse an explosive problem by finding plants that will grow in soil contaminated by TNT.

And they are using contaminated soil from the Joliet Army Ammunition Plant near Elwood to find ways to neutralize such residues from old Army munitions so the ground no longer will be bare.

Traces of TNT from old munitions plants are not dangerous in terms of exploding, or even moving through the soil rapidly to contaminate groundwater, university soil

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chemist Wayne Banwart said.

"But, it is highly toxic to plants and prevents vegetation from growing," Banwart said. "Consequently, erosion is a problem in some areas, and there is some potential for wind and water to carry TNT-contaminated soil into nearby fields and streams."

The researchers hope their work will enable vegetation to be put back onto such land, thus preventing the spread of contaminated soil.

Researchers have been taking several hundred pounds of soil samples from time to time from the Joliet plant, said Doug Thompson, a spokesman for the U.S. Army at the site.

During World War II, it was the site of a munitions repacking operation. A ridge-and-furrow system carried TNT contaminated waste water to a field disposal site. Even now, 40 years after the operation, there is TNT in the top four inches of soil.

"There are significant amounts of TNT still in the field," said Banwart. "The disposal site is about five or six acres in size, so we're concerned about erosion and movement of TNT through erosion."

He said samples from the Joliet site contain 2 percent TNT by weight in the soil surface — more than enough to prevent plants from growing.

One approach the scientists are taking is to use bioremediation to reduce contamination. They mix things like wheat straw and alfalfa with the TNT-tainted soil.

Banwart said preliminary tests show that bioremediation is promising — TNT levels are reduced after the soil is treated.

The other approach is to screen plants in the greenhouse to find species that can tolerate TNT.

The Army has scheduled a tour at 10 a.m. Monday at the plant to show the public the extent of the contamination and the timetable for cleanup.

For more information on the tour, call Thomas Erdman at 424-2906.